

# Effect of hirsutism on quality of life: a study in Iranian women

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**Abstract** *Objective* To evaluate quality of life (QOL) in hirsute women in southeast Iran.

*Patients and methods* In this cross-sectional study a convenience sample of hirsute females aged at least 18 years attending dermatology clinics of Kerman city, southeast of Iran, in 2005 was assessed. Each person with Ferriman-Gallway (F-G) score  $\geq 8$  or one area score equal to 4 was included as a hirsute case. QOL was assessed by self-administrated Dermatology Life Quality Index (DLQI) and SF-36 questioners.

*Results* In this study 96 hirsute females with mean age 27.24 years (range, 18-52 year, SD=6.76) were assessed. The mean F-G score was  $13.57 \pm 6.83$  and the mean DLQI score was  $10.95 \pm 6.76$ . Symptoms and feelings had the highest mean score among DLQI sections ( $2.66 \pm 1.51$ ) and limit to work/role due to emotional problems had the lowest mean score in SF-36 sections ( $52.34 \pm 23.62$ ).

*Conclusion* In our setting, hirsutism had considerable effects on quality of life of the affected women. The most components of the QOL which take effect from the disease are those related to symptoms and feelings.

**Key words**

Hirsutism, quality of life, DLQI, SF-36.

## Introduction

Hirsutism, defined as excessive male pattern hair growth, affects approximately 10% of women.<sup>1</sup> Hirsutism has long been known to cause significant emotional distress and social embarrassment in women. The cosmetic and psychological implications of hirsutism can threaten feminine identity.<sup>2</sup>

Perception of hirsutism is, by definition, subjective, and women present with a wide variation in severity. Both the severity of hirsutism and the degree of its acceptance are dependent on racial, cultural and social factors.<sup>3</sup>

There are many studies on hirsutism in Iran but none of them had focused on the quality of life (QOL) in this group of patients. Studies on medical university students in different cities of Iran showed high frequency of hirsutism in this young population group, the frequencies vary from 16.8% to 31.6%.<sup>4-7</sup> Furthermore the number of hirsute patients referred to dermatology clinics in Iran has increased dramatically over the last two decades.<sup>8</sup> So, in

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this study we assessed the effect of this common problem on quality of life in Iranian women.

### **Patients and methods**

In this cross-sectional study a convenience sample of females aged 18 years and above attending dermatology clinics of Kerman city with hirsutism was assessed. At the beginning, all the participants were informed about the objective of the study and only those who signed the informed consent were included.

Ferriman-Gallway score was used as a visual method of determining the severity of hirsutism in nine androgenic sensitive skin areas (upper lip, chin, chest, upper back, lower back, upper abdomen, lower abdomen, arm and thigh). Each area has 0 to 4 score and F-G score is summation of all 9 area scores.<sup>1</sup> Those patients with F-G score  $\geq 8$  or one area score equal to 4 were eligible cases and included in the study. In the next step, the F-G score was categorized based on the following thresholds: F-G score  $< 8$  with one area score equal to 4 was considered as one-area limited hirsutism, 8-10=mild, 11-14 = moderate and scores more than 15 were considered as severe hirsutism.<sup>9</sup>

Quality of life (QOL) was measured by a valid translated version of dermatology life quality index (DLQI)<sup>10</sup> and 36-item short form health survey (SF-36)<sup>11</sup> questionnaires.

DLQI contains 10 questions which involve 6 sections: symptoms and feelings, daily activities, leisure, work and school, personal relationships and treatment. The total score of DLQI is between 0 and 30 and the higher the score, the more QOL is impaired. The score of 0-1 means no effect at all, 2-5, 6-10, 11-20, and 21-30 mean small, moderate, very large and extremely large effect on patient's life, respectively.<sup>10</sup>

SF-36 has been applied for different medical conditions in order to measure health-related QOL. SF-36 questionnaire measures eight separate health-related components: physical function, social function, mental health, energy/vitality, bodily pain, perceived health, limit to work/role due to physical health and limit to work/role due to emotional problems. Each section gets 0 to 100 score. The higher the score means the better QOL at that section.

Also, cases were asked to complete a form including questions about age, marriage, duration of hirsutism, education, occupation, method of removing unwanted hair and medical problems diagnosed by their physician before. Cases with chronic or debilitating diseases like cardiovascular, thyroid and psychological diseases were excluded from the study. All the questionnaires and the form were self-administrated while guided by a trained facilitator.

The data were analyzed by SPSS-12. The mean QOL score in two groups were examined by independent t-test. The association between the two scores (QOL and SF-36) was measured by Pearson correlation coefficient. The relationship between categorical variables (severity of disease and the quality of life category) was assessed by chi-square test. The  $P < 0.05$  was considered as significance level.

### **Results**

Based on eligibility criteria, 96 patients out of 161 were included in the study. Forty six (47.9%) cases used laser, 38 (39.6%) electrolysis, 8 (8.3%) other methods for hair removal and 2 (2.1%) cases had used both laser and electrolysis.

Average age of the cases was  $27.24 \pm 6.15$  years

**Table 1** Frequency and frequency percent of cases in classification of hirsutism severity based on Ferriman-Gallway score (n=96).

| Hirsutism severity | N (%)     |
|--------------------|-----------|
| Limit to one area  | 16 (16.7) |
| Mild               | 21 (21.9) |
| Moderate           | 20 (20.8) |
| Severe             | 39 (40.6) |

years (range, 18-52 years). About 53% of the cases were married and around 54% of the cases had academic degrees. Most of the cases (54%) were employed or student, while 37.5% were housewives.

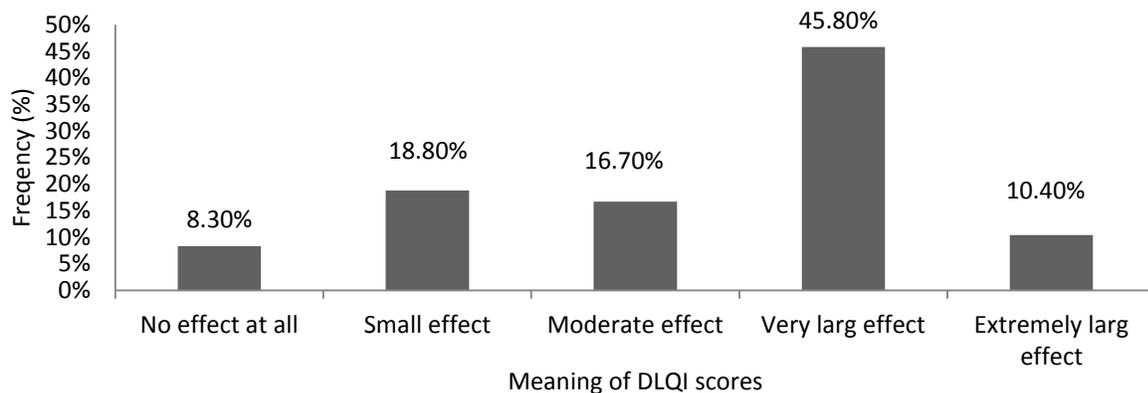
The mean F-G score was  $13.57 \pm 6.83$  with  $8.94 \pm 5.96$  years mean duration of hirsutism. Thirty nine (40.6%) persons had severe hirsutism in this study (**Table 1**). Chin was the most involved area in 95.5% of cases and 59.4% had severe hirsutism (score 4) on their chins.

The overall mean DLQI score was  $10.95 \pm 6.76$ . Hirsutism had high effect on quality of life in (45.8%) cases regarding the QOL score ( $p < 0.001$ ) (**Figure 1**). Symptoms and feelings had the highest mean among DLQI sections ( $2.66 \pm 1.51$ ) (**Figure 2**). Limit to work/role due to emotional problems had the lowest mean in SF-36 sections ( $52.34 \pm 23.62$ ) (**Figure 3**). There

was a significant correlation between DLQI and F-G score in this study ( $p < 0.01$ ,  $r = 0.13$ ). Symptom and feelings ( $r = 0.38$ ,  $p = 0.01$ ) and leisure ( $r = 0.28$ ,  $p = 0.01$ ) had significant correlation with F-G score. However, mental health ( $r = -0.43$ ,  $p = 0.01$ ), energy/vitality ( $r = -0.29$ ,  $p = 0.01$ ) and social function ( $r = -0.23$ ,  $p = 0.02$ ) sections in SF-36 had a reverse significant correlation with F-G score.

All sections of SF-36 except physical function had significant reverse correlation with DLQI score and the highest was between social function and DLQI score ( $r = -0.51$ ,  $p = 0.001$ ). Singles and married had no significant difference in DLQI mean or SF-36 sections score but there was a significant correlation between F-G score and problem in sexual relationship question of DLQI in married ( $r = 0.13$ ,  $p < 0.01$ ). Regarding the occupational statues, there was no significant difference between housewives and employed in DLQI mean but in perceived health section in SF-36 housewives had significant lower score ( $p < 0.01$ ).

Mean DLQI score was significantly higher in electrolysis than laser users ( $p < 0.05$ ) but there



**Figure1.** Frequency (%) in meaning of DLQI scores in women with hirsutism.

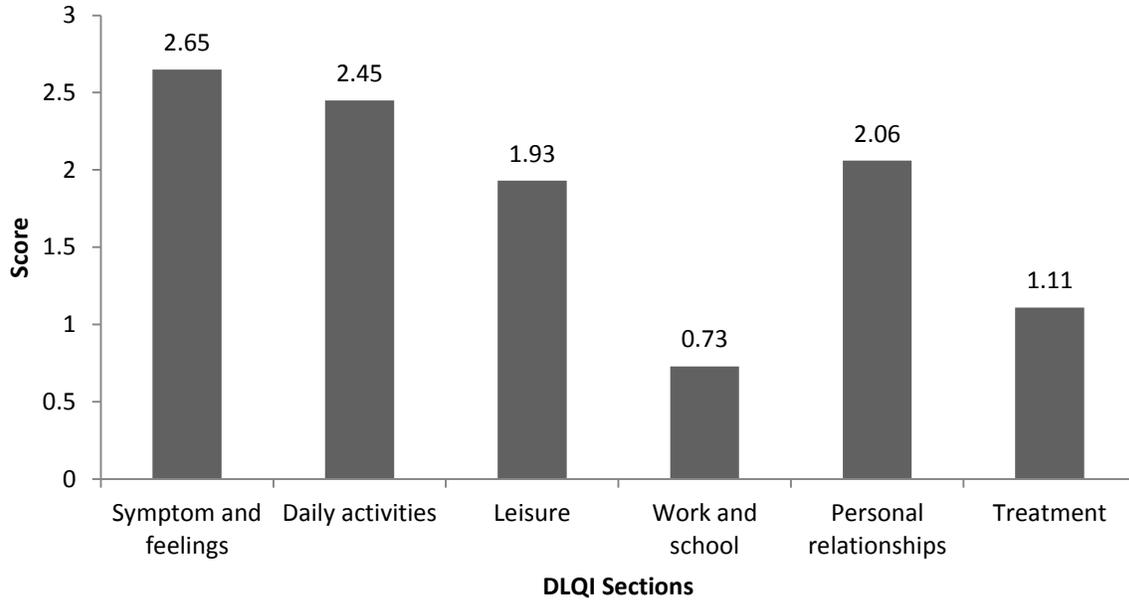


Figure 2. DLQI section scores in women with hirsutism.

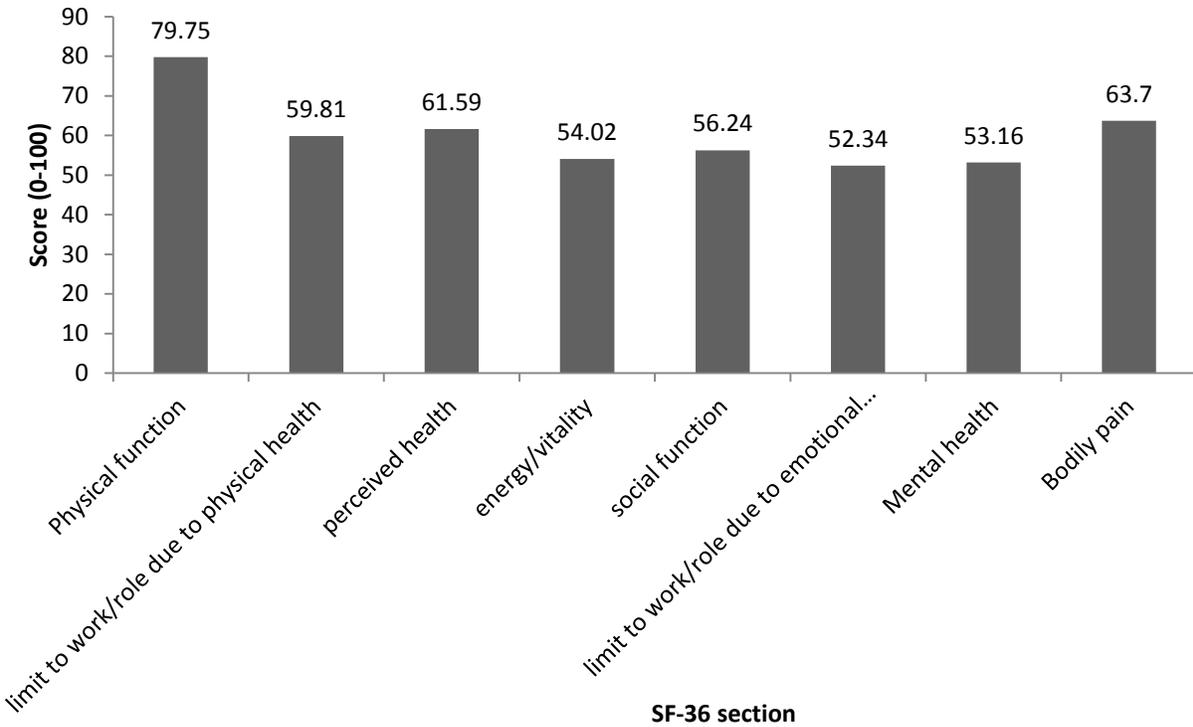


Figure 3. SF-36 section scores in women with hirsutism.

was no significant difference in SF-36 sections between these groups. There was no significant relation between age and duration of hirsutism

with neither DLQI score nor SF-36 sections in this research.

## Discussion

The findings indicated that the quality of life in hirsute women who live in Kerman city in south east of Iran has been affected seriously by their disease. In our patients, symptoms and feelings were the most parts of the quality of life which were affected by hirsutism.

To our knowledge, there are few studies specifically looking at QOL in hirsute women. Assessment of QOL by Jayaprakasam *et al.* in different cutaneous diseases showed that hirsutism (DLQI=12) after Behcet's disease (DLQI=18) had the highest DLQI score.<sup>12</sup> Compared with other studies, DLQI score in our research was between atopic eczema (DLQI=8.9) and severe psoriasis (DLQI=12.5).<sup>13,14</sup> We could not compare our DLQI score directly with other studies because of different research methods and selection of cases.

Health-related QOL in polycystic ovary syndrome (PCOS) patients showed that concerns about excessive hair led to the second most serious QOL impairment.<sup>15-18</sup> The study on women with excessive facial hair indicated that it is a common problem for women and one that significantly impacts their overall QOL.<sup>2</sup> improvement in QOL after laser treatment has demonstrated that unwanted facial hair impairs QOL.<sup>19,20</sup>

A study by Lipton and colleagues showed that unwanted facial hair carried a high psychological burden for women and represented a significant intrusion into their daily lives.<sup>21</sup> Involvement of chin as the most severity affected area could be an explanation for limitation in work/role due to emotional problems. Although, the overall SF-36 score increased with the severity of hirsutism,

symptom and feelings, leisure, mental health, energy/vitality and social function sections were more impaired. These results showed psychological problems by hirsutism more than other sections of QOL. However, in a study on QOL of hirsute women in 1993, social fears (at the SSQ), anxiety and psychotic symptoms (at the SRT) were significantly higher than non hirsute women.<sup>22</sup>

Drostzol *et al.* in their study on PCOS women, indicated a negative effect of hirsutism on QOL and marital sexual functioning in these patients. In their research, marital sexual disorders increased along with hirsutism severity.<sup>23</sup> The result of our study was in concordance with this study in this regard.

Finally, laser users had better DLQI score in this study and of course in previous studies laser reported more effective than electrolysis.<sup>19</sup> But, this study was not designed to compare these methods and it needs a specific research to discuss.

## Conclusion

Hirsutism has a great impact on QOL so it is recommended to include emotional and psychological rehabilitation as well as pharmacological and cosmetic methods in treatment of these patients.

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